

ABSTRACT OF THE DISCLOSURE

A dielectric separation type semiconductor device of high voltage withstanding capability includes a primary dielectric layer (3-1) on a first surface of a semiconductor substrate (1), a first semiconductor layer (2) of first conductivity type disposed oppositely to the substrate (1) with the primary dielectric layer (3-1) sandwiched, a second semiconductor layer (4) of first conductivity type on the first semiconductor layer (2), a third semiconductor layer (5) of second conductivity type surrounding peripherally the first semiconductor layer (2), a ring-like insulation film (9) surrounding peripherally the third semiconductor layer (5), a first electrode (6) on the second semiconductor layer (4), a second electrode (7) on the third semiconductor layer (5), a back-surface electrode (8) deposited on a second surface of the substrate (1), and a first auxiliary dielectric layer (3-2) disposed immediately below the second semiconductor layer (4), being junctioned to the second surface.